

17. Stipe cylindrical, base obtuse. *G. tenera* (Schaeff.) Gillet  
 Stipe radicating strongly at base. *G. antipoda* (Lasch) Gillet  
 Stipe conspicuously bulbous at base. *G. sphaerobasis* (Post) Karst.

## Section BRYOGENAE

1. Stipe white or pallid. 2.  
 Stipe ochraceous, ferruginous, or darker. 4.
2. Pileus rugose-reticulate. *G. reticulata* Pk. 3.  
 Pileus smooth. 3.
3. Lamellae narrow; stipe silky-fibrillose, apex pruinose. *G. bryophila* Pk.  
 Lamellae triangular; stipe glabrous. *G. aquatilis* (Fr.) Gillet
4. Pileus cinnamon or chestnut to ochraceous; stipe 10-15 cm. long. 5.  
 Pileus watery-cinnamon; stipe 4-6 cm.  $\times$  2 mm. *G. Bryorum* (Pers.) Sacc.  
 Pileus ferruginous-orange; stipe 2-3 cm. long. 6.
5. Pileus watery-cinnamon; veil scarcely developed. *G. Sphagnorum* (Pers.) Gillet  
 Pileus darker, often chestnut; veil strongly developed. *G. Sphagnorum velata* Pk.
6. Stipe blackish-brown. *G. Hypnorum nigripes* Pk. 7.  
 Stipe concolorous. 7.
7. Pileus obtuse or subpapillate. *G. Hypnorum* (Batsch) Gillet  
 Pileus strongly umbonate. *G. Hypnorum umbonata* Pk.

## Section Plicatellae

1. Pileus reddish. *G. lirata* (B. & C.) Sacc.  
 Pileus silvery-brown. *G. striatula* Clements  
 Pileus yellow. 2.  
 Pileus ochraceous or fuscous. 3.
2. Lamellae crowded, narrow. *G. flava* Pk.  
 Lamellae distant, broad. *G. semilanceata* Pk.
3. Pileus viscid, pale sordid-fuscous. *G. crocospora* (B. & C.) Sacc.  
 Pileus glabrous, yellow to ochraceous. ***G. plicatella*** (Pk.) \*  
 Pileus densely silky tomentose, ochraceous. *G. pulchra* Clements

## Section Eriodermæ

1. Pileus reddish-tawny; stipe reddish-brown. *G. rufipes* Pk.  
 (See also *Galera Sphagnorum velata* Pk. and *G. tenera pilosella* (Pers.) Pk.)

## AN IMPROVISED HORIZONTAL MICROSCOPE

By H. M. RICHARDS

Horizontal microscopes, while very useful pieces of apparatus, may perhaps be regarded as one of the luxuries of a physiolog-

\* *Agaricus coprinoides* Pk. Reg. Rept. 26: 59. 1874. Not Corda.

*Agaricus plicatellus* Pk. Reg. Rept. 29: 66. 1878.

*Galera coprinoides* Pk. Reg. Rept. 46: 69. 1893.

ical laboratory. It is useful then to know of some substitute for the regulation model, a substitute which may be constructed from the usual apparatus which is found in the laboratory. Having had occasion to set up a number of them, I supplemented the instruments I had in the following manner. An ordinary stand,

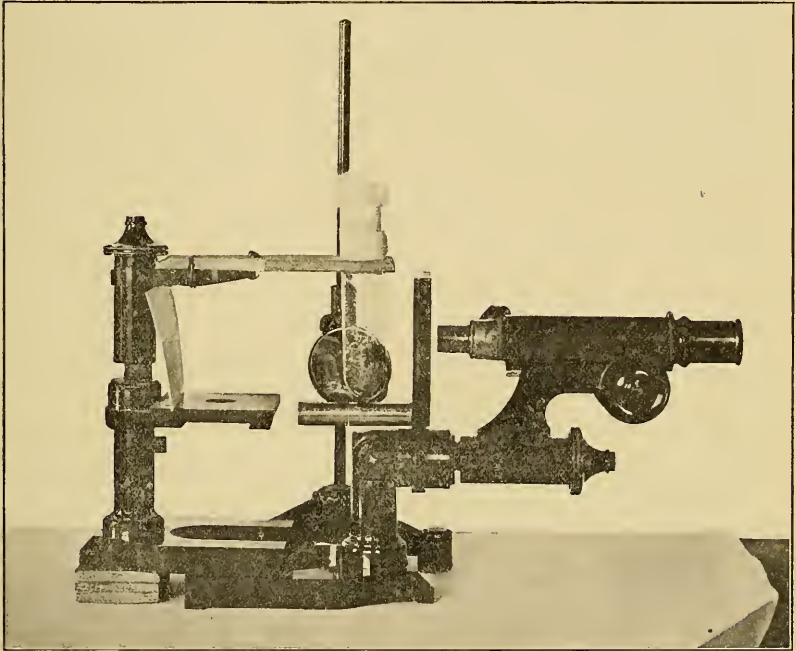


FIG. 1.

with a knee-joint, was inclined to the horizontal. This served as the horizontal microscope itself, after all of the substage apparatus had been removed, the front lens taken off from the No. 3 objective, and a micrometer ruling placed in the eye-piece. So far it is very simple and the idea, at best not a very remarkable one, might occur to any one. The chief difficulty, however, in constructing a horizontal microscope is to provide for the adjustment of the object to be measured, so that it can be brought in the desired position before the scale and so moreover it may be changed in vertical position without any lateral disturbance. Any

one who has tried this will recognize how difficult this seemingly simple operation is. In order to accomplish this successfully, a second microscope was taken (it happened to be an old model without rack and pinion), and was divested of its tube. On the arm a piece of wood was wired and the object-holder — in this case a test-tube — firmly fixed to it. The two microscopes were brought together as shown in the figure and constituted in combination a horizontal microscope. By means of the micrometer screw on the microscope carrying the object, its vertical position could be regulated to a nicety and both of the microscopes being level as to their bases, no errors other than those inherent in such instruments are met with. Of course if the object being measured is itself not vertical, the usual difficulties will be met with. One can only take the usual precautions against this.

## A REMARKABLE PHYSALIS

BY ROBERT F. GRIGGS

For nearly ten years the very peculiar *Physalis* described below has lain, undiscovered, in the National Herbarium. It had been labelled *Physalis Fendleri* but its flowers are five times smaller than in that species. Probably whoever made the first identification never saw the flowers at all and it is not to be wondered at that he did not for they would hardly be noticed except on careful search or by accident. It was by the latter that the writer found one of them after having previously examined the sheet more than once in connection with other work on the genus. Search revealed several more — all of the same degree of minuteness. There is but one sheet, but there seems to be no reason for supposing it to be a freak or abnormal in any respect as the fruits are entirely ordinary and like others of the genus. Hence the following name and description are offered.

### *Physalis minuta* sp. nov.

Perennial from an underground stem, spreading, forming small tufts or mats on the ground; branches not more than 30 cm.